

WHAT IS CLAIMED:

1. A composition comprising a culture of myoblasts to be transplanted into a recipient muscle tissue, together with a suitable pharmaceutical carrier, said culture comprising myoblasts and a muscle-
5 fusion promoting amount of human basic fibroblast growth factor (bFGF), which transplanted myoblasts have been grown in the presence of said amount of bFGF prior to transplantation into said recipient muscle tissue, said amount being capable of increasing by at least two fold the fusion
10 between transplanted and recipient myoblasts over and above the fusion of a same number of transplanted myoblasts not grown in the presence of said promoting amount of bFGF.

2. The composition of claim 1 wherein said bFGF is added exogenously to said culture of myoblasts.

3. The composition of claim 1, wherein said bFGF is produced
15 endogenously in said culture of myoblasts by genetically engineering myoblasts to express a gene sequence encoding bFGF under the control of a promoter capable of governing the production of said amount of bFGF.

4. The composition of claim 3, wherein said promoter is a viral promoter.

20 5. A method of improving the fusion of myoblasts upon transplantation thereof into a recipient muscular tissue, comprising the steps of:

growing a culture of myoblasts comprising myoblasts which have been genetically engineered to express human basic fibroblast growth factor
25 (bFGF) during *in vitro* culturing and to produce same in said culture in an amount capable of increasing by at least two fold muscle fusion between transplanted and recipient myoblasts upon transplantation, over and above the fusion obtained with the same number of transplanted myoblasts not grown in the presence of said amount of bFGF; and

transplanting said culture of myoblasts into a recipient muscle tissue along with said amount of bFGF.

5 6. A method of improving the fusion of myoblasts upon transplantation thereof into a recipient muscular tissue comprising the steps of:

growing unpurified primary myoblasts in culture in the presence of an exogenously added amount of human basic fibroblast growth factor (bFGF) capable increasing by at least two fold the fusion between transplanted and recipient myoblasts upon transplantation, over and above the fusion
10 obtained with the same number of transplanted myoblasts not grown in the presence of said amount of bFGF; and

transplanting said culture of myoblasts into a recipient muscular tissue along with said amount of bFGF.

15 7. A composition as defined in claim 1, wherein said culture of myoblasts comprises fibroblasts.

8. A method according to claim 5, wherein said culture of myoblasts comprises fibroblasts.

9. A method according to claim 6, wherein said culture of myoblasts comprises fibroblasts.

20 10. A composition according to claim 7, wherein said culture of myoblasts comprises primary myoblasts cultured for two days in the presence of bFGF.

25 11. A method according to claim 8, wherein said culture of myoblasts comprises primary myoblasts cultured for two days in the presence of bFGF.

13. A composition as defined claim 1, wherein said amount of
5 bFGF is 100 ng bFGF per ml of composition.

15. A method as defined in claim 6, wherein said amount of bFGF is 100 ng bFGF per ml of composition.